AZALEA LANE®

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Briarwood Collection

Briarwood Engineered Flooring Installation Instructions

Important: Carefully inspect all boards for any defects. ***Boards installed with visible defects are not covered under warranty.*** Please remember that wood is a natural product that can vary in color, grain, and contains natural characteristics that vary from plank to plank and is to be expected. We do not warrant against these natural variations from plank to plank or variations from sample to plank. Always work from 4-5 boxes at a time.

Installation Instructions:

Applications: Briarwood Engineered Flooring may be glued, nailed, or floated.

General Conditions: In area to be installed, temperature and humidity (35%-55%) must be brought to normal "expected" usage levels at least 72 hours before installation and maintained at those levels after installation. Flooring should be allowed to acclimatize on site at least 72 hours before installation. Be sure to check moisture levels in both the sub-floor and your Briarwood flooring before installation. The manufacturer declines any responsibility for failures or deficiencies of hardwood flooring resulting from or related to sub-floor, sub-surface, or job-site environmental conditions. All substrates must be clean, flat, dry, and structurally sound.

Moisture: Perform moisture tests of sub-floor and content of wood before installation of wood. Check NWFA listing on moisture content for your area (www.nwfa.org). While Briarwood Engineered Flooring is much more stable than most woods, it is still subject to damage when in direct contact with a constantly wet slab. Briarwood Engineered Flooring must be isolated from this type of slab by using a reverse vinyl or sleeper sub floor. Urethane adhesive will usually fail when vapor pressure exceeds 3 pounds per 1,000 square feet in 24 hours (CaCl test). Briarwood Engineered Flooring cannot be glued down under these conditions. In most regions, a "dry" subfloor that is ready to work on has a moisture content of 12% or less and the wood should be within 4% of the subfloor moisture content.

Sub-Floor: Subfloor must be leveled to NOFMA and NWFA standards before installation. Surfaces must be clean, dry, smooth and free of dirt, wax, oil, paint, curing agents and other contaminants that would interfere with adhesive bond. Old resilient floors can be installed over provided above conditions apply. Wood sub-floors must be sanded level prior to new installation. Concrete sub-floors must have all cracks and holes filled with cementitious patching material. Concrete sub-floors should be tested for moisture before installation. Moisture levels should not exceed three pounds per 1,000 square feet when using a calcium chloride (CaCl) moisture test.

Work out of multiple (3-4) boxes: Briarwood Engineered Flooring is a natural product and has natural color variations. Mountain Home Engineered Flooring is separated by shade at the factory. Even though we have implemented standards to reduce this issue at the factory level, shade differences between cartons may be noticeable. Mixing cartons creates a natural, random shade effect.

PRE INSTALLATION & JOBSITE CONDITIONS

It is the installer/ owners' responsibility to ensure that the jobsite conditions and jobsite subfloor are environmentally and structurally acceptable prior to the installation of any hardwood flooring. The manufacturer declines any responsibility for failures or deficiencies of hardwood flooring resulting from or related to sub-floor, subsurface, or job-site environmental conditions. All substrates must be clean, flat, dry, and structurally sound.

- Subfloors must be clean and free of dirt, curing compounds, sealers, drywall mud, paint, wax, grease, urethane, or other materials that may affect the integrity of the flooring material or adhesives used to install the flooring.
- All subfloors and subfloor systems must be structurally sound and must be installed following their manufacturers' recommendations. Local building codes may only establish minimum requirements of the flooring system and may not provide adequate rigidity and support for proper installation and performance of a hardwood floor. Whenever possible install the planks perpendicular to the floor joists for maximum

stability. Our warranties **DO NOT** cover any problems caused by inadequate substructures or improper installation of said substructures.

- Test wood sub floors and wood flooring for moisture content using a pin-type moisture meter. The moisture content of the subfloor should not exceed 13% and the moisture content of the wood should be within 4% of the subfloor moisture content.
- The moisture content for concrete subfloors registered after a calcium chloride test should not be greater than 3 pounds per 1000 square feet of area. If it exceeds these limits, DO NOT install the flooring. **Before moisture testing begins, the slab must be cured for a minimum of 30 days.**
- Basements and crawl spaces must be dry. Use of a 6 mil black polyethylene is required to cover 100% of the crawl space earth. Crawl space clearance from ground to underside of joist to be no less than 18" and perimeter vent spacing should be equal to 1.5% of the total square footage of the crawl space area to provide cross ventilation. Where necessary, local regulations prevail.
- The subfloor must be flat, meeting a minimum of 1/8" in 8'.

Concrete subfloors - Grind high spots or use a Portland Cement-based leveling material (minimum compressive strength 3000 psi) to fill all low spots. Follow the leveling compound manufacturer's instruction. Leveling compounds must be allowed to thoroughly cure and dry prior to installation of wood flooring.

Wood subfloors - For staple down application use layers of 15lb. felt or wooden shims to fill low spots. Staples must be able to penetrate for holding power.

- All "wet" work – i.e. – paint, drywall, concrete, masonry, plumbing must be complete and dry well in advance of delivery of hardwood flooring
- Gutters and downspouts should be in place and the exterior grade complete to allow for proper drainage of water away from the building's exterior perimeter.
- Flooring should not be exposed to extremes of humidity or moisture.
- Permanent HVAC should be on and operational a minimum of 7 days and maintained between 65 – 75 degrees and a relative humidity of 35%- 55% prior to delivery, during, and after installation of the flooring.
- If HVAC is not possible at time of installation the environmental conditions must be at or near normal living conditions between 60 – 80 degrees and at the average yearly relative humidity for the area.

It is the Installer/Owner responsibility to ensure that the conditions are acceptable prior to the installation of the hardwood floors. The manufacturer declines any and all problems with the hardwood flooring that are related to or attributed to improper jobsite conditions.

Recommended Subfloor Surfaces:
Concrete subfloors: Concrete slabs should be of high compressive strength and constructed to prevent groundwater from permeating the concrete. Briarwood Engineered hardwood flooring can be installed on, above, or below-grade. In addition, it can be installed over above-ground, suspended concrete floors. The suspended concrete must be a minimum of 1 1/2 inches thick and must be structurally sound. The exception to this is lightweight concrete (which usually contains high amounts of gypsum) having a density of 100 pounds or less per cubic foot. Test for lightweight concrete by using a nail to scratch the surface of the concrete. If the concrete crumbles or turns to powder, it is not sound and you should **NOT** install the hardwood flooring. Use the floating installation method (products 3" or wider) only for lightweight concrete subfloors.

Wood Subfloors:
Preferred Subflooring ¾" (23/32", 18.3 mm) CDX grade Plywood subfloor/ underlayment (Exposure 1), 4'x8' sheets or ¾" (23/32", 18.3mm) OSB subfloor/ underlayment grade, PS2 rated, sealed side down, with joist spacing of 19.2" (475) on center or less.

Minimum Subflooring - 5/8" (19/32, 15.1mm) CDX Plywood subfloor/ underlayment (Exposure 1), 4'x8' sheets, maximum 16" on center joist construction.

Follow the panel manufacturer's recommendations for spacing and fastening. Typical panel spacing and fastening for joist systems, 1/8" (3.2mm) around perimeter and fastened every 6" (150mm) on bearing edges and every 12" (300mm) along intermediate supports. Installation of flooring should not be made over joists spacing greater than 19.2 on center or parallel to the joists unless the subfloor has been properly strengthened, applying a second layer of underlayment may be necessary to bring the overall subfloor thickness to 1-1/8".

- Test the moisture content of the wood subfloor and wood flooring with a pin type moisture meter. Wood subfloors must not exceed 13% and the wood flooring should be within 4% of the wood subfloor.
- For existing wood floors install new flooring at right angles to the existing flooring.

- Do not glue, staple, or nail down hardwood flooring over particle board, floating application is acceptable (products 3” or wider).
- Do not install over existing glue down hardwood floors.

Ceramic tile and terrazzo: All wax and sealers must be removed with an appropriate cleaner/stripper. Ceramic tiles and terrazzo should be abraded to allow for proper adhesion. Check for loose tiles by tapping and re-adhere. Fill grout lines with a cementitious latex fortified leveling compound.

Resilient tile, resilient sheet vinyl: Material must be full spread and secured to the subfloor. Do not install over perimeter-glued floors. Do not install over more than one layer that exceeds 1/8” in thickness.

Nail/ Staple Down Only - If old flooring is unsuitable to install new flooring, then overlay with new underlayment. Test to conclude that the staples/ cleats can properly penetrate and secure the flooring to the subfloor. Our products are not warranted against squeaking, popping or crackling when using staple-down or nail-down installation methods. Some squeaking, popping or crackling is normal and possible when using staple-down or nail-down installation methods. These symptoms may be aggravated in arid areas or during dry conditions.

SPECIAL NOTE: Nail tongue side of the plank over felt, leaving 1/16” washer run parallel within grain as needed. Leave 1/2” expansion gap at walls. Use power nailer recommend for the thickness of flooring being installed.

The following staplers and their respective staple sizes have been identified for the installation of the 3/8" thickness Briarwood Engineered Flooring:

Products:	
Bostitch #LHF97-125	20 ga. x 3/16" crown x 1" long
Bostich #SX 150 BHF-2	18 ga. x 1/4" crown x 1" long
Porta-nail Twin Trigger 20	20 ga. x 3/16" crown x 1" long
Senco #SLS20HF	19 ga. x 3/16" crown x 1" long
Duo-Fast #SS1848F	18 ga. x 1/4" crown x 1" long
Powernail # 200	20 ga. x 1” length e-cleat

Note: Always use a pneumatic flooring stapler that engages the top of the flooring profile over the bottom groove edge at the appropriate angle. Make sure that the flooring stapler is in good working condition and fully seats the staples properly against the bottom groove to prevent top edge or surface damage.

Important: Start by setting the air compressor to 70-80 PSI (or follow the stapler manufacturer’s suggested PSI setting). Adjust the air pressure to ensure proper setting of staples. If splitting damage occurs to the seating area, lower the air pressure. If the staples are not fully seated properly, increase the air pressure setting gradually until proper seating is achieved. Before you begin using the following instructions, please refer to the Pre-Installation Job Prep information above.

NOTE: Our products are not warranted against squeaking, popping or crackling when using staple-down or nail-down installation methods. Some squeaking, popping or crackling is normal and possible when using staple-down or nail-down installation methods. These symptoms may be aggravated in arid areas or during dry conditions.

SET UP AND USE OF PNEUMATIC STAPLERS AND NAILERS

Minor occasional noises within the flooring are inherent to all staple/ nail-down installations and can change as environmental changes occur. This is not a manufacturing defect and is therefore not covered under our warranties (see warranty brochure for complete warranty coverage). You can help reduce squeaking, popping, and crackling by being sure that the subfloor is structurally sound, does not have any loose decking or joists, and is swept clean prior to installation. You should also be sure that your stapler or nailer is setting the fastener properly, not damaging the planks, and that you are using the correct nailing schedule. When used improperly, staples can damage wood flooring. If the tool is not adjusted properly the staples may not be positioned at the proper angle and cause blistering, peaking, squeaking, or crackling of the floor. Some models may require the use of an adapter to adjust for proper thickness. Test the tool on a piece of scrap material first. Should the staple penetrate too deeply reduce the air pressure; if the staple is not deep enough then increase the air pressure using an in-line regulator. The flooring manufacturer is not responsible for damage caused by the mechanical fasteners.

IMPORTANT NOTE: Only use manufacturer's recommended staples or cleats. Read and follow the manufacturer's instructions for complete set-up and operation of equipment.

Getting Started

1. After the subfloor has been properly cleaned and prepped, cover the subfloor with 15lb. asphalt felt paper. This material will help to keep the floor clean and help to retard moisture from below (there is no complete moisture barrier system for staple or nail-down applications).

2. Select a starter wall. An outside wall is best: it's most likely to be straight and square with the room. Measure out from this wall, at each end, the overall width of the plank (board width + tongue + the space needed (3/8" or ½") for expansion).

3. Snap a chalk line from these points, parallel to that wall.

4. Install the first row of starter planks along the chalk line/straightedge and secure into position with the tongue facing away from the starter wall (toward you). Drill pilot holes through the face of the plank every 6" (in the dark grain); approximately 1" from the back edge of the board and secure planks with 1" finishing nails. Countersink nails and fill with appropriate colored wood filler – remove excess filler from surface.

5. Blind nail at a 45° angle through the tongue 1"-2" from the end joints and every 6" in between along the length of the starter boards (Predrill holes to make this easier). Depending on the width of the flooring it may be necessary to do this for the first few rows prior to using a pneumatic stapler/nailer.

NOTE: Proper alignment is critical. Misaligned starter rows can cause side and end gaps to appear in proceeding rows of flooring.

6. Continue to install the flooring making sure to nail/staple 1"-2" from the ends and every 4" – 6" thereafter. Make certain the tool is adjusted properly to ensure that the fastener is at the proper angle and is flush within the nail pocket. As you continue working across the floor try to maintain a six-inch minimum space between end joints. Randomly install different lengths to avoid a patterned appearance.

7. If needed use a tapping block to help engage the boards together until the tongue-and-groove is flush and tight and no gaps are present between adjacent planks. NOTE: Never use a rubber mallet or hammer directly on the flooring to engage the tongue-and-groove. This can damage the flooring and/or finish.

8. As you approach the end wall it may be necessary to cut the width of the last row – be sure to allow for the expansion along the end wall. Once the final cuts are made, set planks into place.

9. The last few rows will need to be fastened by hand. To fasten the final planks into place, you must either manually blind nail and/or face-nail through the surface on the final planks. Drill pilot holes at a 45-degree angle to the floor and blind nail using l" finishing nails. Alternatively, drill pilot holes in the face every 6" (try to drill holes in darker portion of the wood) and install with 1" finishing nails. Countersink nails and fill with appropriate colored wood filler – remove excess filler from surface with a clean rag and proper cleaner.

Glue Down Only – Do not install over more than one layer that exceeds 1/8" in thickness. Clean flooring with an appropriate cleaner and allow to thoroughly dry. If necessary degloss the floor using an abrasive pad to enhance the bonding of the adhesive, if wax or other coatings are present, completely remove the material with a quality stripper, rinse the floor and allow to dry. Always check for proper adhesion bond prior to installation.

Getting Started

1. Select a starter wall. An outside wall is best: it's most likely to be straight and square with the room. Measure out from this wall, at each end, the width of two planks including the tongue plus the space needed -3/8" for expansion.

2. Snap a chalk line from these points, parallel to that wall.

3. Prior to installing the flooring, secure a straight edge inside the chalk line to act as a guide and to prevent the row of planks from shifting during installation. The straightedge could be a straight piece of lumber or piece of flooring.

Alternatively, the first row can be face-nailed with finishing nails into the wood subfloor or sprig nailed into a concrete subfloor.

Spreading the Adhesive

Using the proper trowel, hold the trowel at a 45° angle to ensure proper spread rate of adhesive. Apply pressure to allow the trowel to leave ridges of adhesive on the substrate with little adhesive left between the ridges. This will help to achieve the proper spread rate of the adhesive. Temperature and air flow across the adhesive can have an effect on the open time of the adhesive. (See Adhesive label for further information).

Installing the Floor

4. Spread adhesive from the chalk line/straightedge out to approximately the width of two planks. Install the first row of starter planks along the chalk line/straightedge and secure into position with the tongue facing the starter wall.

NOTE: Proper alignment is critical. Misaligned starter rows can cause side and end gaps to appear in proceeding rows of flooring. When you have the starter rows complete, you can begin the next row

5. When you are certain the first two starter rows are straight and secure, spread adhesive 2 to 3 feet wide across the length of the room. As a general rule, never spread more adhesive than can be covered in 30 to 45 minutes. If the adhesive has skinned over remove dried adhesive and trowel new adhesive.
6. Continue to install planks and push them into place. Place the tongue of the board into the grooves of installed boards and press into the adhesive. As you continue working across the floor try to maintain a six-inch minimum space between end joints. Randomly install different lengths to avoid a patterned appearance.

NOTE: Never strike a rubber mallet or hammer directly on the flooring to engage the tongue-and-groove. This practice can damage the flooring and/or the finish.

7. Remove the adhesive from the surface of the installed flooring as you work – this will help to save time. A damp rag with water or mineral spirits will remove adhesive. Frequently change towels to avoid leaving a haze on the flooring surface. DO NOT use water to remove Urethane adhesives from the finish.
8. As you approach the end wall it may be necessary to cut the width of the last row – be sure to allow for the expansion space along the end wall. Once the final cuts are made, set planks into place.
9. After the installation of the floor is complete, remove the straight edge and glue down the first two boards.
10. Restrict foot traffic for a minimum of 6-8 hours and wait 24 hours before permitting the moving of furniture onto the floor.
11. Clean any wet adhesive from the flooring with lightly dampened clean cloth. If the adhesive has dried, use mineral spirits on a clean cloth. For Urethane adhesive use the recommended urethane adhesive remover.
12. Roll and cross roll floor with a 100-150 lbs (45-70 kg) roller at the end of the installation to ensure proper transfer of adhesive.

Final Inspection: After the floor has been cleaned, inspect the floor for nicks, scratches, gaps or planks that may have moved during installation, as well as any other imperfections that need attention. Touch up nicks and scratches with touch-up products, and gaps with putty. In typical climates, the new floor can accept foot traffic within 24 hours. In areas where additional curing time is required, more time may be needed.

Floating:

1. Install Underlayment: Unroll the 6mil Poly sheeting overlapping edges 4” and seal seams with clear plastic tape. Allow the poly to run 2” up the wall and trim back after installation of flooring. Install 1/8” foam underlayment. 6mil Polyethylene required over concrete type sub-floors on grade or below grade. Use of a floating floor 2 in 1 underlayment may be used. Follow manufacturer’s instructions for application installing the 2 in 1 underlayment. Float floor flat to 1/8” in a 10’ area.
2. Begin running a continuous bead of adhesive along the groove width and end with a PVA-type adhesive. You must ensure that the beads of glue are constant and not intermittent. Because this is a floating floor system the glue placement is very important. The glue should be placed along the top side of the groove and the full length of the groove (sides and ends). This can be accomplished by inverting the plank and applying bead of glue (3/32”) on the upper side of the groove. When the plank is turned back over the glue will run down the back to create total coverage. If the groove is totally filled with glue, it could hinder the closing of the seams because of excessive glue, thus not allowing a tight fit.

3. Install first row of planks with groove facing the straight edge. Make sure there are no gaps between the boards. Use a tapping block, if needed, to close the boards together. At the end wall use an end pry bar, if needed, to pull the ends of the planks tight.
4. After several rows of planks are installed, use tape 12" apart to hold the planks securely together. (Laminate straps may damage the flooring).
5. Do not allow traffic or remove spacers for a maximum of 24 hours on floor or as recommended by adhesive manufacture.

- Do not install over carpet.
- If installing over vinyl, ensure it is secure to the sub floor. Do not install over perimeter-glued vinyl.
- If installing over an existing wood floor, install the flooring at right angles to the wood floor.
- Do not install over wood flooring glued to a concrete sub floor.
- ½" of expansion space required at all vertical surfaces.
- Do not install if material is bowed coming out of the box.

Note: In extremely dry climates, care should be taken to avoid shrinkage by allowing flooring to acclimate under actual use conditions. Remove the planks from the box and expose to local conditions for several days. Make sure that humidity levels remain constantly between 35%-55% after installation.

Radiant Heated Subfloors

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Non-Approved products are not warranted for use over Radiant Heat

- Prior to installation of flooring over radiant heat system it is important that the guidelines are followed in strict accordance. Failure to follow the guidelines may produce unsatisfactory results.
- Floating installation method only, direct glue down is NOT recommended.
- Sub floor must be flat to 3/16" in 10' or 1/8" in 6'
- Prior to installation moisture testing must be conducted and documented per ASTM test method 1869-89 for concrete or using a pin type meter for wood sub floors.
- The moisture content for concrete sub floors registered after a calcium chloride test must not be greater than 2 pounds per 1000 square feet of area. If it exceeds these limits, DO NOT install the flooring.
- Relative humidity of the jobsite must be maintained between 35-55% relative humidity. Use of humidification system may be required to maintain the proper humidity level. Failure to maintain proper humidity level can result in excessive dryness of flooring.
- It is highly recommended that the radiant heat system be designed specifically to accept a wood floor

1. Use of an in floor temperature sensor as well as a separate thermostat for the individual room is required.
2. An outdoor temperature sensor should be used to adjust water temperature according to anticipated heat loss.

JOBSITE REQUIREMENTS

Prior to installation of flooring the radiant system must be installed per manufacturer's instructions.
Before installation of flooring material, the following conditions are required:

1. Moisture content of concrete must not exceed 3.0 lbs per CaCl test method (ASTM1869-89) Wood sub floors not to exceed 12% and be within 4% of the wood flooring.
2. Concrete must be allowed to properly cure and dry a minimum of 4 weeks prior to operation of radiant heat system.
3. Operation of radiant heat system should be set to run at 2/3 maximum output for a minimum of 2 weeks prior to installation of flooring to further allow moisture from concrete to dissipate and reach a final moisture content. This must be done in both heating and non-heating seasons.
4. Prior to installation (4 days) reduce to a temperature of 65°.
5. Floating Installation - Install flooring according to floating floor installation guidelines. Use of a 2 in 1 underlayment is required.
6. When gluing planks run a continuous bead of adhesive in the groove on both the end and length of the board.
7. Remove any excess glue that squeezes out onto surface of the planks with a clean damp rag. Change rags and water periodically to avoid leaving a haze on surface.

AFTER INSTALLATION & SEASONAL OPERATION

- 48 hours after completion of installation, slowly raise the temperature of the heating system to its preferred operating level over a period of 5 days. Do not allow the surface temperature to exceed 80°
- Humidity level must be maintained between 35%-55% R.H.
- Seasonal gapping should be expected.

- Surface checking can be expected if the proper humidity level is not properly maintained between 35-55% R. H. or if the floor's surface temperature exceeds 82°.